

Biology Copy Soil & Water

FAX COVER SHEET

From: Larry Dawes

Fax number: 509-327-4742

Company: Biology Soil & Water, Inc.

Subject: Liberty Lake Estates

Date: 10/2/06 Pages: 10

Dear John Konen

Please find attached the written testimony I will provide to the Hearing Examiner tomorrow. I will also cover all of this in my oral testimony as well. I revisited the site yesterday and spent a long time checking out the fate of all drainage from the subject streams. All water from draws on the site flows into the ditch along Liberty Lake Drive. The water flows south in the ditch to the wetland located on adjacent property to the south. There is no culvert that allows stormwater to flow into a stream across the road. All of the water remains in the wetland so there is no surface water connection to a Type 1-4 Water and none of the draws are regulated. After a thorough site investigation I decided that was the point I needed to make and that makes all of the issues go away. I am headed out to a meeting, but try to call me when you are free this afternoon to discuss this. I have faxed a copy to the attorney also.

See you tomorrow.

Regards,

Larry

Hearing Examiner City of Liberty Lake October 3, 2006

Re: Liberty Lake View Estates Critical Areas Issues

Greetings Hearing Examiner:

Storhaug Engineering retained Biology Soil and Water, Inc. (BSW) to investigate the Liberty Lake View Estates property located on the west side of Liberty Lake Drive in the south ½ of Sec 15 and the north ½ of Sec 22, T25N, R45E. BSW was asked to do a reconnaissance survey of the site for wetlands, streams, and critical areas issues and provide a one-page report of findings to Storhaug Engineering. The undersigned investigated the site for Critical Areas on 11 June 2006. Based on the site investigation, BSW concluded that there were no jurisdictional wetlands or jurisdictional streams on the subject property.

In September 2006 Storhaug Engineering contacted the undersigned again. BSW was advised that Buddinger and Associates reviewed the site in January 2006 and suggested that one area on a site map could be a wetland or an intermittent stream and warranted further investigation by a qualified professional. Based on the report from Buddinger and Associates, the City of Liberty Lake wished to investigate that area in the field. The undersigned was asked by Storhaug Engineering to accompany City staff into the field and lend scientific expertise to that site visit. BSW revisited the site with City of Liberty Lake staff members Doug Smith and Mary Wren-Wilson on September 25, 2006. Based on the September 2006 site investigation with City staff, BSW concluded again that the subject area is not a jurisdictional wetland or jurisdictional stream.

On Monday October 1, 2006 Storhaug Engineering faxed BSW part of the City staff report. The staff report stated that evidence of an intermittent stream path was visible, the path contained damp soil, and small plants including moss. The staff report expressed concerns about a proposed road crossing the intermittent stream. Storhaug Engineering asked the undersigned to provide detailed testimony to the Hearing Examiner and City staff explaining why there are no wetlands or jurisdictional streams on the subject property. I will also address each of the concerns raised by City staff relating to the issue of intermittent streams. First I will address the larger issue of jurisdictional status of the streams on the subject property.

I would also like to go on the record to state that to this day I have never seen the Buddinger report. On the day I met City staff in the field I had no idea what part of the site we were investigating or what the specific issues were. I appreciate their taking the time to visit the subject area in the field. After reading the staff report I now understand the areas of confusion. I obviously did not do an adequate job of answering questions in the field or fully communicate to City staff the basis for my conclusions or I would not have to be here today. For that I apologize to Mary and Doug.

I often do reconnaissance surveys of property for potential buyers or developers and provide a short letter describing Critical Areas issues they must address when they develop the property. That is all I was paid to do and that is all my report was intended to be so I did not provide any detail or justification for my conclusions in that short one page letter.

Storhaug Engineering used the letter of findings for the same purpose Spokane County uses Riparian Specialist and Wetland Specialist form letters. The form letter either simply states that there are no jurisdictional streams or states the stream type and associated buffer. No detail or justification is required by the consultant, only a statement of what is there. The City of Liberty Lake has not adopted a similar process, but I will address that later.

Jurisdictional Status of Draws on the Subject Property

There are several small draws on the hillside that collect surface water from very small areas of surrounding drainage basin. These draws collect snowfall and precipitation but most of the water infiltrates into the soil and does not appear as surface water. During heavy precipitation events on saturated soils, snow melt, or rain on frozen ground, surface water runs into the subject draws and continues down gradient to Liberty Lake Drive. This surface water runs into the ditch on the west side of Liberty Lake Drive and flows south in the ditch toward a wetland located on adjacent property located south of the subject property. A culvert was placed in a primitive access road to the adjacent property to the south, but the culvert in the ditch is bent upwards and no longer functions properly. Surface water in the ditch infiltrates into the soil but some may still make it to the wetland. If the culvert was repaired, water would make it to the wetland, but the wetland has no surface water connection to the east side of the road and Type 1-4 Waters.

The Water Typing System WAC-222-16-031 states that "Type 5 Waters must be physically connected by an above-ground channel system to Type 1, 2, 3, or 4 Waters." The subject draws do not have physical connection by an above-ground channel system to Type 1, 2, 3, or 4 Waters so the draws on the subject property do not meet the Water Typing System definition of a Type 5 Water and they are not regulated. Under the revised DNR Water Typing System Type 5 Waters are designated as NS or seasonal non-fish streams if they have a physical connection by an above ground channel system to Type 1, 2, 3, or 4 Waters. The definitions did not change, only the names of the categories have changed. The intermittent streams on the subject property are not classified as Type NS or Type 5 Waters and are not regulated regardless of whether you use the old or new stream type designations.

That was the basis for my conclusion that there are no jurisdictional streams on the subject property. I did not explain that in my letter to Storhaug Engineering because I knew all of that was understood by John Konen. John Konen knows that developer needs to place an appropriate sized culvert in each draw crossed with a road and they are aware that there may be seasonal flow in the draws, but the draws are not regulated. That is the information they wanted to find out from me, are the intermittent streams on the property jurisdictional. My report simply stated that none of the draws are jurisdictional streams.

Description of the Subject Area

An existing access road enters the north end of the property from Liberty Lake Drive, curves and proceeds to the southwest as it climbs up gradient. An east/west oriented draw proceeds down hill and intersects the access road about 100 feet south of entrance to the property. The drainage basin of the draw is very small and only includes the immediately adjacent hillsides that slope into the draw. The bottom of the draw is narrow and the sides are relatively steep. The bottom of the draw is vegetated with rose, snowberry, serviceberry, ninebark, and other upland shrubs.

Just above the access road the bottom of the draw becomes broader and less well defined. Prior to historical disturbance and construction of the existing primitive road, the draw may have continued east down gradient another 50 feet or so to Liberty Lake Drive, but it no longer does. Any seasonal surface water in the draw now runs down gradient to the northeast in the same direction as the access road.

A little further south from this draw a second small draw develops that I investigated in the field with the City of Liberty Lake. Along Liberty Lake Drive and below the existing access road the hillside slopes gently toward Liberty Lake Drive. Below the access road and several yards south of the first mentioned draw, a rock outcrop juts out toward Liberty Lake Drive. The north side of the outcrop slopes toward the north forms the second draw. The bottom of the draw is a wooded area about 50 feet wide. The draw begins below the existing access road and extends about 100 feet east toward Liberty Lake Drive.

There may be some confusion on the part of City staff regarding the two draws because reference was made to the draw being crossed with a road or driveway in the staff report. The two draws described here do not have a hydrologic connection. The northmost draw flows down hill to the existing access road, then surface water flows to the northeast along the pathway of the road. The second draw is located a few yards further south and originates below the existing access road. This draw is very short and collects water from a very small area of drainage. The entire draw is about 100 feet long and collects water from an area that is about 100 feet wide including the draw itself.

The fate of the water in both draws is the same so it really does not matter because neither draw is regulated. But it is necessary to address this as it goes to the amount of hydrology in the lower draw investigated in the field with City staff on September 25, 2006. I did not see evidence of sufficient hydrology to even call this short draw a stream. City staff refers to this draw as potentially being crossed with a road so I wanted to clarify that these two draws are not hydrologically connected and that may be part of the confusion that I need to straighten out here.

Methodology

The Washington Administrative Code has completely different definitions for wetlands and streams so they are treated differently under the law. Most local jurisdictions have one set of buffer widths for streams based on Water Types defined in the WAC's and a different set of buffer widths for each wetland category. The methodology for delineating a wetland is defined by the Army CORP of Engineers 1987 manual. The Federal Manual for the Delineation of Jurisdictional Wetlands, (Corp of Engineers, 1987) was used as a guideline and reference for the site investigation. The routine determination procedures require a positive indicator for the three lines of evidence used to make a wetland determination: hydrophytic vegetation, hydric soils, and hydrology. A site must have all three wetland indicators to be classified as a wetland.

The staff report states that the stream path was damp. BSW concurs that in the subject area the surface soils were damp on the morning of the investigation. I immediately noticed that, but I also noticed that when my boot scuffed the surface soil, the underlying soils were very dry. I concluded that surface moisture was from dew in the humid draw where the early morning sun had not yet fallen to dry the damp surface. I also noted that the surface soils were brown in color and indicated an upland landscape position. The surface soils were not a dark hydric soil that would be found in a wetland.

After reading the reference to damp soils in the City staff report I returned to the site and dug two test holes to a depth of 20+ inches in the lowest elevational contour of he draw. The surface layer was damp from dew to a depth of about 1/8-inch. The soils were even drier than field capacity and had a very low moisture content consistent with an upland landscape position.

The surface soils were 10YR2/2 gravelly silt loam to a depth of greater than 20 inches consistent with an upland landscape position. No mottling was present in the upper 20 inches to indicate the influence of a high water table during the growing season. The soils do not indicate saturated conditions during the growing season in the top 20 inches of the soil profile. There were no drift lines, sediment deposits, water stained leaves, oxidized root channels, or indicators of reducing conditions in the soil during the growing season. In order for a site to be a wetland it has to meet all three of the wetland criteria including soils, vegetation, and hydrology. The site does not have hydric soils so it is not a wetland.

Vegetation in the Draw

The Staff report states that the subject area contained moss and other small plants. The Northwest Interagency Review Panel provides a list of plant species specific to the northwest that are indicators of wetlands in our area. No mosses are on the list. However the same moss species indicated in the City staff report also grows on adjacent areas of the subject property on decaying logs, the surfaces of rocks, and in the decaying humus on the forest floor in distinctly upland landscape positions. It is not a wetland indicator species. This moss species only needs a small amount of dampness to thrive.

The outcrop and hillside surrounding the draw has thin soils and a Ponderosa pine overstory that extends down into the draw. The woody overstory of the draw is dominated by aspen with a few hawthorns in the very bottom of the draw, both of which are Facultative species that are found with equal regularity in wetlands and uplands. Aspen/snowberry and aspen/sagebrush habitat types are common and neither habitat type occurs in wetlands. These tree species have long roots that penetrate deep into the soil to

obtain water when it is not available close to the surface as in wetland conditions. However, the upland species tall Oregon grape, ninebark, snowberry, serviceberry, and rose dominate the shrub overstory. The herbaceous understory is also dominated by upland species. There is a small percentage of St. John's wort, a Facultative species that is found with equal regularity in wetlands and uplands, but the herbaceous understory is definitely dominated by upland species. Well represented the subject area are knapweed and arrowleaf balsamroot, herbaceous species that, like all of the shrub species, are never found in wetlands.

The tree canopy is dominated by species that sometimes occur in wetlands. However, the shrub and herbaceous canopies are dominated by upland species so the site does not meet the vegetation criteria for being a wetland. When the standard methodology for determining the wetland vegetative criteria is applied and percent relative canopy covers for all three canopy levels are averaged, the site does not come close to meeting the vegetative criteria for being a wetland.

One would not expect the site to meet the wetland hydrology criteria this late in the growing season, so the investigator must rely on indicators of hydrology in the vegetation and soil. The vegetation and soils do not have indicators of wetland hydrology. None of the wetland criteria are met so the site is not a wetland.

Riparian Areas

101

A stream Ordinary High Water Mark (OHWM) delineation is based on evidence of high water during a normal year and definitions of Water Types in the Washington Administrative Code. In assessing the subject area in June 2006, BSW followed the well-defined methodology for determining the OHWM of a stream. High water effects on vegetative species, water marks on woody vegetation, and drift lines are all evaluated in determining the OHWM. The OHWM is defined as the process of ascertaining where the presence and action of waters are so common and usual, and so long continued in normal years, as to mark on the soil a character distinct from that of the abutting upland in respect to vegetation.

Seasonal hydrology in the subject area is so negligible that it has had no effect on the character of shrub and herbaceous vegetation. Apart from the deep-rooted trees, the subject draw has distinctly upland vegetation. There is no water stained bark on trees and there are no drift lines, stratified alluvium in the soils, or scours from surface water that would indicate a defined channel in the subject area. However, Type 5 or Type NS Waters do not have to have a defined channel. Waterways in swale bottoms can often be 50-100 feet wide without well-defined channels in some areas then neck down through narrow rock outcrops and have well defined channels. Surface water may flow across the subject area as shallow sheet flow and not leave any marks or create a well-defined channel. I did not think the subject area had a defined channel, the City staff did. I did not think the 100-150 foot long draw was large enough or met the criteria to be called a stream, the City staff did. However, the questions of whether there is a channel or not or whether it is an intermittent stream or not are academic. The only relevant question is whether there is a surface water connection to a Type 1-4 Water. There is not so the area is not a regulated stream.

Conclusions

During the winter months when Buddinger investigated the site, it would be quite common to find standing water in small upland depressions due to conditions of saturated soils or rain on frozen soils. It is also common in the winter to find rivulets of water running down hillside draws during precipitation, snow melt, or saturated soil conditions. Those areas may be, but are not necessarily, wetlands or streams. No one at Buddinger has expertise to make a wetland or Water Type determination, so Buddinger showed due diligence by suggesting that the subject area needed further investigation by a qualified biologist. As a result of the Buddinger recommendation, BSW was retained to investigate the site and submit a report of findings based on professional interpretation of evidence at the site. That report, submitted in June 2006, concluded there are no jurisdictional wetlands or streams on the subject property. Based on a recent more detailed investigation of the site my conclusions are the same.

The Water Typing System WAC-222-16-031 states that "Type 5 Waters must be physically connected by an above-ground channel system to Type 1, 2, 3, or 4 Waters." None of the draws on the subject property have a physical connection by an above-ground channel system to Type 1, 2, 3, or 4 Waters so the draws on the subject property do not meet the Water Typing System definition of a Type 5 Water and are not regulated. This is a very straightforward site and there should be no controversy regarding the jurisdictional status of the subject area. Based extensive professional experience in the application of the Water Typing System the undersigned concludes that there is not a jurisdictional stream on the subject property. There are no wetland indicators in the draw so the area is not a wetland.

Critical Areas Investigations

Planning departments can either hire qualified biologists to complete wetland and riparian investigations and reports, or utilize qualified professionals from the community. BSW recommends that the City of Liberty Lake request resumes showing educational and professional experience from local consultants and compile a list of Qualified Biologists that can be relied on to make accurate field determinations on jurisdictional matters. When Wetland Inventory Maps, DNR Stream Type Maps, or other planning tools indicate that wetlands or streams could be present on a site, the property owner would be required to hire a qualified professional from the City list who will investigate the site and make a scientific report of findings that the planning department can use in the processing of applications.

Spokane County has compiled a list of Qualified Biologists and has also adopted Wetland Specialist and Riparian Specialist form letters to streamline the permitting process. Riparian Specialist form letters allow biologists in the field to apply the Water Typing System defined in the WAC's, apply the recommended buffer widths, and report the findings on a form letter that can be used by planners who are not qualified biologists to process routine applications. The Wetland Specialist form letters allow biologists to apply in the field wetland delineation criteria to determine a Wetland Category and buffer width and report the findings on a form letter that can be used by planners.

The form letter format allows planners to know that more extensive field review by local jurisdictions is not necessary because their well-defined criteria have been applied when making the routine field determinations. The form letters are especially useful on small projects where all proposed activities will be located outside of the buffer and the expense of a formal delineation and report is not warranted for an individual homeowner. Formal delineation is still required on larger projects where it is necessary to survey a delineated boundary and plot it on a site plan map. Please find attached a copy of each form letter for review and consideration.

The form letters authorize a well-established procedure that is used so that Cities and Counties do not have to hire qualified scientists to do site reviews. This methodology also prevents long written responses, testimony at hearings, and explanations of simple issues that can only be resolved in the field by professionals with expertise in the relevant science fields. Please consider adopting the attached form letters to simplify the reporting process. Thank you for the opportunity to provide testimony.

Respectfully submitted,

Larry Dawes
Biology Soil & Water, Inc
W. 725 Chelan
Spokane, WA 99205
Phone 509-327-2684
Fax 509-327-4742

WETLAND SPECIALIST LETTER

I,	Larry Dawes		(print name), am a "qualified wetlands
specia	list" as defined in Sec	tion 1.20.020 of the Spokane	County Critical Areas Ordinance. My business
name,	mailing address and ph	one number(s) are as follows:	•
		Biology Soil & Water, I	
		West 725 Chelan	
	City, State, Zip: _	Spokane, WA 99205	
	Phone Number: _	509-327-2684	
	Fax Number:	509-327-4742	· · · · · · · · · · · · · · · · · · ·
FIND	INGS: (INITIAL (ONE of the below findings)	
	I find that the belo	w property DOES NOT have a v	etland or a wetland buffer on the property.
the bel	low described project.		and wetland buffer within the near vicinity ofwetland and it has aft
			retland buffer setback and needs further ane County Critical Areas Ordinance.
The ta	x parcel number of the PLAN: See the attach e wetland buffer(s). PERTY OWNER: Name: Mailing Address: City, State, Zip:	ed site plan of the above propert	y, which illustrates the location of the wetland(s)
PROJ			
l visite			d wetland buffers using the criteria established above to be true.
	S	GNATURE	DATE

Mail copy to: Spokane County Building & Planning, 1026 W. Broadway, Spokane, WA 99260 Phone: (509)477-3675

RIPARIAN STREAM LETTER

I,	Larry Dawes		(print name), have measured the channel
width	n perpendicular from the p	proposed development.	My name, mailing address and phone number(s) are as
follo	ws:		
	Company Name:	Biology Soil & V	/ater, Inc.
	Mailing Address:	West 725 Chelan	
	City, State, Zip:	Spokane, WA 99	205
	Phone Number:	509-327-2684	
	Fax Number:	509-327-4742	
FINI	DINGS: (INITIAL O	NE of the below finding	s)
prope		property DOES NOT h	ave a stream nor a riparian habitat buffer on the
vicini ripari	I find that the below ity of the below described an habitat buffer. The pro-	property DOES have a project. The stream is pject will befl	stream and riparian habitat buffer within the near a Type stream and it has a ft beyond the riparian habitat buffer.
revie			to the riparian habitat buffer setback and needs further e Spokane County Critical Areas Ordinance.
PRO	PERTY: The street addr	ess of the proposed pro	ject is:
	ax parcel number of the p		
and th	he riparian habitat buffer(PERTY OWNER:	s).	property, which illustrates the location of the stream(s)
	Name:		
	City, State, Zip:	· · · · · · · · · · · · · · · · · · ·	
	Phone Number:		
PRO	JECT DESCRIPTION:		
		·	
			·
I visit	NATURE: ted the above property, me pokane County Critical A		nel, and riparian buffers using the criteria established in I the above to be true.
	SIG	NATURE	DATE

Mail copy to: Spokane County Building & Planning, 1026 W. Broadway, Spokane, WA 99260 Phone: (509)477-3675



BIOLOGY SOIL & WATER, INC.

W. 725 Chelan, Spolane WA 99205-3245

John Konen Storbaug Engineering 510 E. Third Avenue Spokane, WA 99202

June 12, 2006

Re: Liberty Lake View Estates Critical Areas Issues

Greetings John Konen:

Rudeen Development, LLC retained Biology Soil and Water, Inc. (BSW) to complete a reconnaissance survey of the Liberty Lake View Estates property located on the west side of Liberty Lake Drive in the south ½ of Sec 15 and the north ½ of Sec 22, T25N, R45E. The undersigned investigated the site for Critical Areas on 11 June 2006. Based on the site investigation, BSW concludes that there are no jurisdictional wetlands or streams on the subject property. The subject property does not fall within a colored polygon on the Spokane County Fish and Wildlife Conservation Areas Map that would indicate protection of a species or habitat is suggested by WDF&W. The undersigned did not identify any species listed by State or Federal agencies that has Threatened, Endangered, Candidate, Sensitive, Monitor or Proposed status.

The subject property is not encumbered by the buffer of any jurisdictional wetland or stream. The DNR Stream Types Map classifies the stream on the east side of Liberty Lake Drive as a Type 4 Water with a 75-foot buffer. That buffer extends toward Liberty Lake Drive and the subject property. At its intersection with Liberty Lake Drive the existing primitive access road to the subject property lies outside the riparian buffer. That access road will be made wider and improved to accommodate the proposed development. Construction of the access road will not result in a buffer impact to the stream on the opposite side of Liberty Lake Drive. No development will occur in the stream buffer. Based on the site reconnaissance survey, BSW did not identify any potential Critical Areas issues. If BSW can be of further assistance on this project, please contact the undersigned at your convenience.

Respectfully submitted

Larry Dawes

Biology Soil & Water, Inc

W. 725 Chelan

Spokane, WA 99205 Phone 509-327-2684

Fax 509-327-4742

email browing@icebruse.net

phone (509)-327-2684

lax (509)-327-4742





Biology Soil & Water

FAX COVER SHEET

From: Larry Dawes
Fax number 509-327-4742
Company: Biology Soil & Water, Inc.
Subject:

Date: 8/14/06 Pages: 2

Dear Amanda Tainio

Please find attached a revised letter indicating there are no NWI wetlands or associated buffers on the subject property. Sorry about the fax quality, but you would not be able to open an emailed file written on my company letterhead. Thank you.

Regards, Larry Dawes

If all pages were not received, call 509-327-2684

From: Larry Dawes To: Amanda Talmio

Date: 0/14/06 Time: 3/37.42 PM

Page 2 of 2



MOLOGY SOIL & WATER, INC.

W 725 Chidan Spokerie WA 49205.3245

John Konen Storboug Engineering 510 E. Third Avenue Spokane, WA 99302

August 14, 2006

Re: Liberty Lake View Brunes Critical Areas (assess

Greetings John Koren:

Radeen Development. LLC resulted Thology Soil and Witter, Inc. (BSW) to complete a recommaissance survey of the Liberty Lake View fistates property located on the west side of Liberty Lake Drive in the south is of Sec 15 and the north is of Sec 20. T25N, R45E. The undersigned investigated the use for Critical Areas on 11 fame 2006. Based on the site investigation, BSW concludes that there are no pirisdictional wetlands on succurse on the subject property. No wetlands on the NWL map or their halfers encumber the subject property. The subject property does not laid within a colored polygon on the Spokane County Fish and Wildlife Conservation Areas Map that would indicate protection of a species or habbat is suggested by WDF&W. The undersigned did not identify any species listed by State or Federal agencies that has Threatened, Endangered, Candidate, Sensitive, Monitor or Proposed states.

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Respectfully submitted.

Larry Dawest Biology Soil & Water, Inc

W. 725 Chelen Spokane, WA. 99205

Phone 309-)27-2684

Pax 509.123 GARAMANICA have bee

piene (4191-327-7664

Sex (309)-007-1747.

